

## Exhibit C

# SCOPE OF SERVICES

This scope of services has been prepared based upon our understanding of the project needs through field review, discussions with the County of San Bernardino (SBCFCD) staff, review of existing plans, and our experience on previous similar projects. Should the County (SBCFCD) desire to change this work program, any such modifications may be discussed and negotiated.

The following scope of work and fee proposal was prepared for the design of the ultimate Rialto Channel improvements from Willow Avenue to Cactus Basin No. 1, a total length of approximately 12,850 feet. Basin No. 1 is located just north of Etiwanda Avenue. It is assumed that the existing RCB culvert crossings at Willow Avenue, Lilac Avenue/San Bernardino Avenue, and Bloomington Avenue are structurally sound and have the capacity to convey the ultimate 100-year design flows and therefore, will remain in place. The design for the ultimate RCB culvert crossings at Randall Avenue, Merrill Avenue, 2<sup>nd</sup> Street, Foothill Boulevard, Rosewood Street, and Etiwanda Avenue including the underground RCB improvements from the SCRRA/BNSF Railroad to the old abandoned SP Railroad (approximately 2,400 feet in length) is assumed to be included in our existing design contract with the County (SBCFCD) and therefore, not a part of this proposal.

### *Phase 1 - Data Collection and Review*

#### **Task 1.1 Research and Data Inventory**

AEI•CASC's project team will gather and perform a thorough review of available drainage and street plans, drainage studies, topographic maps, and utility plans, and other plans relevant to the design of the project.

AEI•CASC will conduct field investigations to familiarize the project team with the drainage conditions, flow patterns, existing design constraints, and existing improvements in the project area.

AEI•CASC will contact the appropriate utility companies whose facilities may be impacted by the project. Discussions will include investigation into location of existing facilities, estimated costs of relocating facilities and potential conflicts with the proposed drainage improvements. If needed, AEI•CASC will coordinate the relocation of facilities affected by the project.

#### **Task 1.2 Design Mapping and Field Survey**

AEI•CASC will perform office calculations to determine record centerline and right of way for the Rialto Channel from Willow Avenue to Randall Avenue. This includes mapping research time for record maps and ties for the project area. AEI•CASC will also analyze field data and existing monumentation in relations to record channel alignment.

AEI•CASC will perform field surveys for locating and detailing the existing box culverts at Willow Avenue, Lilac Avenue/San Bernardino Avenue, and Bloomington Avenue. This scope will also include 8 hours of field survey time for locating other topographic features within the project limits that may be used to facilitate the design of the channel improvements. Any additional field survey time that may be required beyond this initial 8 hours will be covered under a separate contract addendum as authorized and approved by the Client.

## ***Phase 2 - Final Plans, Specifications and Estimates (PS&E) Preparation***

### **Task 2.1 Improvement Plans Preparation**

AEI•CASC will prepare plan and profile construction drawings at a scale of 1" = 40' horizontal and 1" = 4' vertical for the proposed Rialto Channel improvements using the County's (SBCFCD) title block. This scope was developed based upon the assumption that this plan set will be prepared in conjunction with our current Rialto Channel Culvert Crossing contract. It is anticipated that the plan set, **total of 33 sheets**, will consist of approximately **1 title sheet, 16 plan and profile sheets, 6 drainage detail sheets, 4 cross section sheets, 2 structural section sheets, 2 lateral profile sheets, and 2 junction structure detail sheets**. The plan and profile sheets will show the fully improved channel section (trapezoidal and/or rectangular channels); the drainage detail sheets will show the typical channel design detail and other drainage facility design details; the cross section sheets will show the typical channel cross section between the crossings based upon existing channel cross sections derived from the design topographic map; the structural section sheets will show the rectangular channel structural sections, transition channel sections, and the retaining wall sections; the lateral profile sheets will show the stub-out profile for the following laterals: 100 feet of Line I3 (per CSDP # 3-3), 150 feet of Line G (per CSDP # 3-3), 200 feet of the Bloomington Drain (per CSDP # 3-3), 100 feet of the Randall Drain, and 35 feet of the I1 lateral (per CSDP#3-3) from the channel up to the channel right of way; and the junction detail sheets will show the junction structure for Line I3, Line G, Bloomington Drain, the Randall Drain, and I1 lateral.

The drawings will be prepared in AutoCAD, Version 2002. The WSPG computer program will be used to perform the hydraulic calculations for the system. The County (SBCFCD), City of Rialto, Caltrans, and APWA standards and structures will be used in the design.

### **Task 2.2 Drainage Technical Report**

AEI•CASC will prepare a drainage technical report in support of the final design plans. This report will include a technical narrative outlining the assumptions and results of the study, hydraulic calculations, structural calculations, and catch basin/drainage inlet sizing calculations.

### **Task 2.3 Storm Water Pollution Prevention Plans (SWPPP)**

AEI•CASC will develop a Storm Water Pollution Prevention Plan (SWPPP) and complete the Notice of Intent (NOI) application in accordance with the State Water Resource Control Board's (SWRCB) 1999 General Construction Activity Storm Water Permit.

### **Task 2.4 Bid Documents and Specifications**

Utilizing the County's (SBCFCD) boilerplate information, AEI•CASC will prepare the bid specifications package consisting of the bidders' instruction, bid sheets, general specifications, special provisions, and technical specifications. The document will be provided to the County (SBCFCD) in Microsoft Word.

## **Task 2.5 Bid Schedule and Cost Estimates**

AEI•CASC will prepare and submit a final opinion of probable quantities and costs for the various construction items shown on the plans at the 95% design submittal.

## ***Phase 3 - Final Agency Approval***

### **Tasks 3.1, 3.2, and 3.3: Drainage, SWPPP, and Drainage Report Processing**

AEI•CASC will submit the plans and report at the 75%, 95%, and 100% completion stages. We will perform the necessary design and drafting revisions needed to obtain plan and report approval from the County (SBCFCD). AEI•CASC will prepare final construction quantities and cost estimates with the final submittal. Additionally, AEI•CASC will provide the County (SBCFCD) with a written report each month to provide an update on the progress of the work throughout the duration of the project.

### ***Reimbursable Costs***

AEI•CASC will bill the County (SBCFCD) for all incurred reimbursable costs in conformance with our standard fee schedule. Any additional reimbursable costs incurred beyond the initial authorized amount of \$10,800 will be covered under a separate contract addendum as authorized and approved by the County (SBCFCD).